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"DARK LANE," WITH ALLUSIONS TO OTHER LOCALITIES OF WILD PLANTS IN SALEM.

BY GEO. D. PHIPPEN.

"And lest the reader should too often languish with frustrate desire to find some plant he needeth of rare vertue, he spareth not to tell in what wood, pasture, or ditch, the same may be seene and gathered."—GIRARD.

It has been justly noticed that the enthusiasm of the youthful founders of this institution, under its primitive name of the Essex County Natural History Society, found zealous occupation in sustaining its floral exhibitions, held every summer for several years, and at first as often as weekly, at every recurrence of which, one or more stands were devoted exclusively to the exhibition of wild flowers.

The ease with which at that time, some thirty-five years since, a large collection of native plants could be gathered, including many of the rarer sorts, in the short space of an afternoon ramble, and that not necessarily out of the territory of the city, would, we think, somewhat surprise a frequenter of the field meetings of the

present day, when contrasted with the paucity sometimes manifested at collections brought in at some of these meetings, even when conducted by committees of considerable size. Since that time much waste and unoccupied land, then quite wild and neglected and seldom visited by its owners, has been enclosed and built upon; woods have been cleared, new roads made, or old ones straightened and widened, and the ancient rude stone walls, under and around which nestled many a rare plant, have given place to more modern structures of wall, fence, or neatly trimmed hedge.

The custom of laying out extensive suburban residences has rapidly increased, until at the present day the fear of trespassing upon private property keeps the investigations of the botanical student longer in the highway, and forces him to travel a far greater distance than formerly, to find the choicer gifts of flora in her favorite haunts.

This is, perhaps, more than compensated by the ease with which distant points are readily gained, and a much larger circuit surveyed, by availing one's self of the rapid conveyance which the radiating lines of railroad now afford.

We are confident from the botanical experience of many years in the county and other parts of the State, and of New England, that the territory of Salem was formerly remarkable for its numerous and peculiar localities of wild shrubs and plants, which fact has had many an attestation from strangers who have visited us. Many plants now justly esteemed rare could then be readily obtained by an early morning walk before the labors of the day began.

Some of these localities were as follows: The vicinity of "Castle Hill," where flourished fine specimens of the

Shad Bush and Cockspur Thorn, two species of yellow *Gerardia*, purple *Lespedeza*, *Uvularia*, Cow Parsnip and *Alisma Plantago*.

Farther on at "Legg's Hill," with its neighboring coppices, ponds and runs of water, where among various forms of ferns, sedges and equisetum could be found the *Sarracenia* with its peculiar flowers and more remarkable leaves; the Dogtooth Violet, "the yellow bastard Daffodil with spotted leaves" of the pioneer Josselyn, that rare tree the *Laurus benzoin*, *Caltha*, *Lythrum*, *Eupatorium perfoliatum*, *Vicia cracca*, *Calla*, *Acorus*, *Arum*, and our only parasite, *Cuscuta*, with its golden threads and diminutive waxen bells.

"Great Pasture," a wide and varied territory of rocky wastes, shady water courses and meadow lands, where may still be found many of the plants above named, also *Sassafras*, species of *Sumach*, *Pyrus*, *Prunus*, and other trees, *Ericaceous* shrubs in abundance, as species of *Vaccinium*, *Andromeda*, *Azalea* and *Kalmia*; while *Cypripedium*, *Bloodroot*, *Bellworts*, *Medeola* and *Convallaria*, are a few of the many species to be found in its woods. In its low grounds two species of *Lily*, two species of *Lobelia* and *Orchis*, *Arethusa*, *Cymbidium*, *Rhexia*, *Hottonia*, and others.

"Columbine Hill," in the Great Pasture, is the same to-day as when Spencer, long absent but not forgotten, wrote that its direction from town might be traced by the scarlet nectaries of the *Columbine* strewn in the way by the numerous boys returning on "lecture day," with hands well filled with its showy bells.

"Salem Neck" also had its peculiar flora, *Cakile*, *Statice*, *Datura*, *Archangelica*, Marsh Pea and *Solidago sempervirens*, the noblest of all the golden rods; also obscure species of the pink tribe and others, without allud-

ing to marine plants that grow within the wash of the sea. A remarkable specimen of the shrubby and rare form of *Rhus Toxicodendron* or poison ivy, may still be seen at Juniper, among rocks jutting over the sea; its usual form being that of a slender rambling vine.

"North Salem," however, with its numerous fields and old stone walls, stretching toward "Danvers" that was, on the one side, and on the other with points and bays bordering the sea, in its variety of surface and of soil, was richer in wild plants than any other section of the suburbs.

"Cole's Hole and Barr's Pasture," furnished *Uvularia*, *Arum*, and *Geum rivale*, two *Osmundas*, and other ferns.

"Paradise," including Harmony Grove, not then devoted to its present sacred use, abounded in *Columbines*, *Ranunculus* and *Violets*, two species of *Geranium*, *Genista tinctora* of the Puritan dyer's memory, *Silene inflata*, *Dianthus armeria*, our only American pink, and that perhaps a straying from Europe; also many other plants, and some quite rare. "Orne's Point, Cold Spring and vicinity," before Kernwood was appropriated, had climbing over its old walls, *Clematis*, Bitter-sweet, Thornless *Smilax*, Roxbury waxwork, Native Grapes and other vines, while scattered over its surface could be found *Comandra*, *Ceanothus*, species of *Polygala*, *Sanicula*, Marsh Pea, Wild Onion, *Erigeron Philadelphicum*, species of *Convallaria*, *Gerardia flava*, *Gentiana saponaria*, *Corydalis glauca*, *Veratrum viride* and *Erythronium Americanum*.

But no limited locality of the neighborhood at all compared with that portion of "North Fields" known as "Dark Lane," which extended from the corner of what is now School and Grove streets, to Central street in Peabody, and which several years since was straightened,

and graded into the present wide avenue, known as Tremont street, so that now scarcely a vestige remains of its former shrubby and umbrageous growth; even its once expressive name may soon be lost unless perpetuated by this institution, whose trust it is to guard and preserve our local history, whether territorial, social, or in whatever sense the same may be insignial. So prolific in shrubs and plants were the borders of this way that it is not too much to say that a careful description of the different species there found would make a respectable botanical work, embracing as it did a fair portion of the flora of New England.

When first remembered by the writer there hung around its sombre name a vague regret of traditional derivation, that its deepest shades and choicest recesses, homes of the rarer floral congeners, had in a degree already departed; sire and matron of the olden time told a like story of its shady borders and abundant floral productions. This narrow lane was formerly undoubtedly bordered with trees of native growth, whose interlacing branches once shut out the sun, and suggested the appropriate name it so long bore. At the time of which we write the trees had nearly all disappeared, with the exception of an occasional Locust or Wild Cherry, while in their stead grew a wide and exuberant hedge of overhanging shrubbery, which so crowded upon the narrow cart-way that with vain regrets we often witnessed the cropping of its margin by the neighboring farmers, to save its wasting effect upon loads of hay carted through from contiguous grounds.

This deep hedge of shrubbery, tangling vines and tall herbaceous plants, grew on either side for many a rod of the way, quite up to the single line of cart ruts made in the centre, extending also in many places as far beyond

the stone walls into the adjoining fields, and was composed of different species of Cornels, Viburnums, Spiræas, Sumacs, Prunus, Pyrus, Barberry, Clethra; also Sweet Briar, and other wild roses, and here and there festooned with Clematis, Apios, Celastrus, Smilax, Bitter-sweet, Grape, and other vines; while from the damp and rich soil along the walls, under their shadow and in more vacant spaces among the shrubbery, grew in rich profusion many species of both lowly and lofty herbaceous plants, flowering in successive order, from the Houstonias and Violets of early spring, to the Yarrow and other composites that linger to welcome the falling snow.

Some of these shrubs and plants, of which we have many pressed specimens, gathered there more than thirty years since, to which are attached descriptive tags of locality, etc., are given below, together with others that exist most graphically in the memory, both as to specific form and exact spot of growth, as though we could return once more and pluck them again from their ample stems.

OF SHRUBS AND LOW TREES WERE

Cornus circinata.
Cornus stolonifera.
Cornus paniculata.
Corylus Americana.
Viburnum Lentago.
Viburnum dentatum.
Viburnum pyrifolium.
Cephalanthus occidentalis.
Clethra alnifolia.
Berberis vulgaris.
Rosa Carolina.
Rosa rubiginosa.
Rosa lucida.
Rubus odoratus.
Rubus strigosus.
Rubus villosus.

Rhus glabra.
Rhus vernix.
Myrica cerifera.
Comptonia asplenifolia.
Andromeda paniculata.
Andromeda ligustrina.
Alnus serrulata.
Salix eriocephala.
Robinia pseudacacia.
Prunus Virginiana.
Prunus serotina.
Crataegus Crus-galli.
Spiræa opulifolia.
Spiræa salicifolia.
Spiræa tomentosa.
 Species of *Prunus* and *Pyrus*.

OF VINES.

Clematis Virginiana.
Vitis Labrusca.
Celastrus scandens.
Apios tuberosa.

Solanum dulcamara.
Smilax rotundifolia.
Rhus Toxicodendron.

OF HERBACEOUS PLANTS OF THE COARSER SORT.

<i>Phytolacca decandra.</i>	<i>Ambrosia artemisiæfolia.</i>
<i>Leonurus Cardiac.</i>	<i>Asclepias Cornuti.</i>
<i>Nepeta Cattaria.</i>	<i>Asclepias pulchra.</i>
<i>Urtica gracilis.</i>	<i>Verbascum Thapsus.</i>
<i>Urtica dioica.</i>	<i>Erigeron sp.</i>
<i>Sonchus arvensis.</i>	<i>Aster Novæ Angliæ.</i>
<i>Lactuca elongata.</i>	<i>Aster corymbosus.</i>
<i>Nabalus albus.</i>	<i>Aster Radula.</i>
<i>Inula Helenium.</i>	<i>Aster lævis.</i>
<i>Chelone glabra.</i>	<i>Aster simplex.</i>
<i>Eupatorium purpureum.</i>	<i>Aster longifolius.</i>
<i>Eupatorium perfoliatum.</i>	<i>Aster cordifolius.</i>
<i>Verbena hastata.</i>	<i>Diplopappus linariifolius.</i>
<i>Verbena urticifolia.</i>	<i>Diplopappus umbellatus.</i>
<i>Eriogonum biennis.</i>	<i>Solidago bicolor.</i>
<i>Epilobium angustifolium.</i>	<i>Solidago cæsia.</i>
<i>Epilobium lineare.</i>	<i>Solidago stricta.</i>
<i>Baptisia tinctoria.</i>	<i>Solidago neglecta.</i>
<i>Rudbeckia laciniata.</i>	<i>Solidago odora.</i>
<i>Helianthus divaricatus.</i>	<i>Solidago Canadensis.</i>
<i>Tanacetum vulgare.</i>	<i>Solidago lanceolata.</i>

HERBACEOUS PLANTS OF MORE HUMBLE GROWTH.

<i>Impatiens fulva.</i>	<i>Polygonum hydropiperoides.</i>
<i>Galium asprellum.</i>	<i>Centaurea nigra.</i>
<i>Galium trifidum.</i>	<i>Maruta and Achillea.</i>
<i>Liatris scariosa.</i>	<i>Arum triphyllum.</i>
<i>Campanula glomerata.</i>	<i>Trillium cernuum.</i>
<i>Lysimachia stricta.</i>	<i>Xyris bulbosa.</i>
<i>Lysimachia quadrifolia.</i>	<i>Linaria Canadensis.</i>
<i>Convallaria racemosa.</i>	<i>Linaria vulgaris.</i>
<i>Uvularia sessilifolia.</i>	<i>Pedicularis Canadensis.</i>
<i>Uvularia perfoliata.</i>	<i>Osmunda regalis.</i>
<i>Ranunculus sp.</i>	<i>Osmunda cinnamomea.</i>
<i>Aquilegia Canadensis.</i>	<i>Gentiana Andrewsii.</i>
<i>Hypericum perforatum.</i>	<i>Saxifraga vernalis.</i>
<i>Anemone nemorosa.</i>	<i>Thalictrum dioicum.</i>
<i>Anemone Virginiana.</i>	<i>Thalictrum anemonoides.</i>
<i>Hypoxis erecta.</i>	<i>Lilium Canadense.</i>
<i>Houstonia cerulea.</i>	<i>Gerardia flava.</i>
<i>Hepatica triloba.</i>	<i>Gerardia purpurea.</i>
<i>Agrimonia Eupatoria.</i>	<i>Geum rivale.</i>
<i>Viola rotundifolia.</i>	<i>Geranium maculatum.</i>
<i>Viola pubescens.</i>	<i>Geranium Robertianum.</i>
<i>Cistus Canadensis.</i>	<i>Aralia trifolia.</i>
<i>Antennaria margaritacea.</i>	<i>Apocynum androsæmifolium.</i>
<i>Antennaria plantaginifolia.</i>	<i>Polygala sanguinea.</i>
<i>Gnaphalium polycephalum.</i>	<i>Equisetum arvense.</i>
<i>Polygonum sagittatum.</i>	<i>Cuscuta Americana.</i>
<i>Polygonum Persicaria.</i>	

Most of these plants grew in great profusion, and not as scattered specimens. So true was this of the shrubs and coarser herbaceous plants that on several occasions entire arbors were built of them in years long past at autumnal exhibitions of this institution.

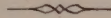
Clematis and Apios could be gathered in wreathing festoons of flowers, and large quantities of the colored

fruits, of species of *Cornus*, *Viburnum*, *Cratægus*, and *Sambucus* in their season, added not a little to the display. Of the above plants, once so common in Dark Lane but now lost from the suburbs, or yearly growing more distant, may be mentioned

Campanula glomerata.
Centaurea nigra.
Xyris bulbosa.
 Species of Bellworts and of
 Solomon's seal,
Trillium cernuum,

Gentiana Andrewsii,
Geum rivale,
 Sp. of *Galium*,
 Sp. of *Orchis*,
Rhus venenata.
Apios tuberosa, and others.

The foregoing list of plants of this remarkable locality, is very imperfect and could be much increased by mentioning the naturalized and more common plants which were also abundant. If, however, we have maintained the claim so justly due this noted locality, we shall not have given these facts in vain, and therefore close this article by expressing the wish that the more recent disciples and amateurs of this interesting science, would note down and preserve in durable form, the plants that still occupy the individual localities that remain to us undisturbed, in the suburbs of our city.



FIELD MEETING AT BRADFORD.

(Continued from p. 96.)

THE time having been entirely occupied by the speakers already mentioned, there was no opportunity for the botanists to present their collections of rarities, which was much regretted by all. Mr. George D. Phippen has kindly presented the following report of his forenoon's excursion.

The botanical party, who dispensed with carriages, probably bore more of the heat and burden of the day than any other of the several extempore organizations, in their three or four mile tramp of meadow and woodland, finished off by skirting a portion of the banks of the Merrimac River. Among the forms met with and collected there seemed to be an unusual absence of Ericaceous plants; no *Kalmias*, *Vacciniums*, *Andromedas* or *Pyrolas* were brought in, and but a speci-

men or two of the *Azalea viscosa*; though a few others may have been passed on the route. Very fine specimens of *Pogonia ophioglossoides*, remarkable for its delicate and peculiar fragrance were collected, also an Orchis or two, alike denizens of the bog.

Numerous blossoms of the starry *Hypoxis* twinkled low among the thin shrubbery; interesting to the botanist, but to the superficial observer scarce distinguishable from a *Potentilla* or *Ranunculus*, genera peculiarly abundant at this time. In the low lands where the party, including several ladies, all damped their feet, were fine plants of *Geum rivale* and *Saxifraga Pennsylvanica* just passing out of flower; also the obtrusive Green Hellebore with its large plaited leaves and abundant green flowers. To a majority of our party the most novel plant seen was a brilliant patch of *Cystilleia coccinea* or painted cup, though not considered uncommon is yet rare in the vicinity of Salem.

The great heat of the day, and the hour high noon, rather deadened the usual and peculiar zeal of collectors. The last object of interest remembered being the *Betula lenta*, or black birch tree, whose branches overhung the river's bank. A hasty glance at the grounds of the residents as we listlessly passed to the shaded seats and welcome tables, provided upon the Common, demonstrated a refined taste. Among the trees and shrubs were noticed the *Magnolia tripetala* and other rare shrubs and plants.

As there was no opportunity given the botanical party to report, and as the collected flowers before the meeting closed had become limp and undistinguishable, we must guess at what they might have said.

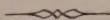
The meeting then took a recess to enable the members and their friends to visit the building.

Bradford Academy is the oldest seminary for young ladies in the State. Founded in 1803, and incorporated in 1804, it has been in operation ever since. A new building has just been erected for the use of the school, bringing the boarding and school departments under the same roof. This new building is delightfully situated in the centre of an area of about twelve acres of land. The location is elevated and commands a large extent of country on every side, giving fresh invigorating air, with unsurpassed beauty of prospect. The healthfulness of this location has been abundantly proved during the past years of the school. The structure is in the form of a cross, four stories high, and is built of brick, with underpinnings and facings of granite. Corridors run through the building from east to west, a distance of two hundred and sixteen feet, affording delightful and healthful promenades when inclement weather forbids exercise out of doors. A parlor and two bedrooms constitute a suite of rooms for four pu-

pils. These rooms are twelve and eleven feet high, newly furnished, and receive a full supply of pure air and sunlight. The school halls, recitation rooms, parlors, rooms for business, bathing rooms and closets, are all on a most generous scale, whether for convenience, health or comfort. The entire building is heated by steam, and lighted by gas. No effort or expense has been spared to make this a model establishment.

After going over the building the party again met in the Hall and listened to some elocutionary exercises conducted in fine style, showing great proficiency on the part of the pupils and efficiency on the part of the teachers. The meeting then adjourned.

At 5 o'clock the visitors took the train for home, much delighted with their visit and the hospitable manner in which they were welcomed by the citizens of Bradford.



FIELD MEETING AT SWAMPSCOTT, WEDNESDAY, JULY 21, 1870.

THE second field meeting, the present season, was held at Swampscott this day.

The morning was not auspicious for a large attendance, the sky being overcast by clouds, which, however, disappeared as the day advanced, and the later trains brought a large addition, so that the afternoon session was fully attended.

After leaving the baskets at the Town Hall, which was the place of rendezvous for the day, all were quickly dispersed about the town; some went to the woods, and roamed over the forest hills and dales in search of wild flowers and rare specimens of plants; others to the seashore, and sought the shells and other wonders from the briny deep. Those who had an eye to the beauties of art took a quiet walk through the streets and admired the beautiful suburban residences and neat cottages embowered in ivy and other vines.

At 1 P. M. the various parties returned to the Hall, where the baskets had been stored for the collation. At 3 P. M. the session for discussion, etc., was held, the President in the chair.

The records of preceding meeting read.

The following correspondence was announced by the Secretary:

From American Antiquarian Society, Worcester, June 19; Aiken, William E. A., Baltimore, Md., June 25; Arnold, George, Boston, July 5; Bronson Library, Waterbury, Conn., June 28; Barton, E. M., Worcester, July 1; Boyd, W. H., Washington, D. C., June 12, 16, 27, July 2, 12; Buffalo Historical Society, June 16, July 11; Challen, Howard, Philadelphia, July 1; Cook, George H., New Brunswick, N. J., June 27; Duncan, M. W., Haverhill, June 27; Greene, S. A., Boston,

June 23; Harlman, W. H., Louisville, Ky., June 22; Historical and Philosophical Society, Cincinnati, Ohio, June 21, 27; How, Joseph, Methuen, July 8; Illsley, F. J., Newark, N. J., June 25; Lunt, William P., Boston, July 11; Morris, Robert, Chicago, Illinois, July —; Moravian Historical Society, Bethlehem, June 19; Niven, James, Saugus, July 8; New England Historic-Genealogical Society, Boston, June 16, July 9; New York Historical Society, New York City, June 16, July 9; Ohio Mechanics Institute, Cincinnati, O., June 16; Phippen, George D., Salem, June 16; Public Library, Boston, June 24; Preble, George H., Mare Island, June 21; Rhode Island Historical Society, Providence, R. I.; Smithsonian Institute, Washington, D. C., July 20; Thompson, Waldo, Lynn, July 13; Tracy, C. M., Lynn, July 6, 8, 18; Upham, W. P., Providence, R. I., July 18; Vincent, Frances, Wilmington, Delaware, June 28.

The Librarian reported the following additions :

By Donation.

ADDITION TO DIRECTORIES. Washington and Georgetown, 1834-70, 18 vols. 8vo. Baltimore City, 1 vol. 8vo. Richmond and Fifty Counties of Virginia, 1 vol. 8vo. Cleveland, 3 vols. 8vo. Susquehanna Railroad, 1 vol. 8vo. Trenton, 2 vols. 8vo. Columbus, 1 vol. 8vo. Atlanta, 1 vol. 12mo. Paterson, 2 vols. 8vo. Boyd's Business, 2 vols. 8vo. Jersey City, 3 vols. 8vo. Newark Business, 2 vols. 8vo. New Jersey State, 1 vol. 8vo. Camden, 1 vol. 8vo. U. S. Druggists, 1 vol. 12mo. Merchants and Bankers, 1 vol. 8vo. Boston and Albany Railway, 1 vol. 8vo. Northern Railroad Business, 1 vol. 8vo. New York State Business, 1 vol. 8vo. New York City, 3 vols. 8vo. Poughkeepsie, 2 vols. 8vo. Oneida County, 1 vol. 8vo. Syracuse, 1 vol. 8vo. Auburn, 1 vol. 8vo. Elmira, 1 vol. 8vo. Binghamton, 2 vols. 8vo. Syracuse and Onondaga County, 1 vol. 8vo. Rome, 2 vols. 8vo. Schenectady, 1 vol. 12mo. Saratoga, 1 vol. 8vo. Brooklyn Business, 1 vol. 12mo. Wilmington, 2 vols. 8vo. Delaware State, 1 vol. 8vo. Indianapolis, 7 vols. 8vo. Chicago, 2 vols. 8vo. Milwaukee, 2 vols. 8vo. New Orleans, 3 vols. 8vo. National Calendar, 2 vols. 12mo. Bridgeport, 1 vol. 12mo. Norwich, 1 vol. 8vo. Hartford, 1 vol. 8vo. Philadelphia, 18 vols. 8vo. Philadelphia Business, 1 vol. 8vo. Pittsburgh and Allegheny, 1 vol. 8vo. Lancaster, 1 vol. 8vo. Harrisburg, 1 vol. 8vo. Williamsport and Lock Haven, 1 vol. 8vo. Erie, 1 vol. 8vo. Louisville, 1 vol. 8vo. Railway Business, 1 vol. 8vo. Kentucky State Gazetteer and Business, 1 vol. 8vo.

BUTLER, BENJAMIN F., M. C. Causes of the Reduction of American Tonnage. Chandler's Speech in U. S. S. on "Proposed Annexation of Winnipeg. Hoar's Speech in U. S. H. R., on "Universal Education." Butler's Speech in U. S. H. R., on "Independence of Cuba." Ambler's Speech in U. S. H. R., on "Belligerent Rights of Cuba." Monthly Report on Agriculture for May and June, 1870. Butler's Address at Woodstock, Conn., on "Suggestions of the Effect of an Imported Laboring Class upon American Institutions."

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FARNUM, JOSEPH. White's Dental Catalogue, 1867. 1 vol. 8vo.

GAFFIELD, THOMAS, of Boston. Waterston's address on the Life and Character of Thomas Sherwin. 1 vol. 8vo. Boston, 1870.

GREEN, SAMUEL A., of Boston. Miscellaneous pamphlets, 28.

HOWARD, J. J. *Miscellanea Genealogica et Heraldica*, April, 1870.

ILSLEY, FERDINAND I., of Newark, N. J. *Augusta City Directory*, 1 vol. 8vo. *Newark Directories*, 5 vols. 8vo. *St. Paul Directory*, 1 vol. 8vo. *New Orleans Directory*, 2 vols. 8vo. *Portland, Oregon, Directory*, 1 vol. 8vo. *Mobile Directory*, 3 vols. 8vo. *Austin Directory*, 1 vol. 8vo. *Richmond Directory*, 1 vol. 8vo. *Memphis Directory*, 1 vol. 8vo. *New Haven Directory*, 1 vol. 8vo. *Virginia City, Gold Hill, Silver and American City Directory*, 1 vol. 8vo.

JAMES, THOMAS P., of Philadelphia. *Proceedings of American Pomological Society for 1864 and 1867*.

LEE, JOHN C. *Commercial Bulletin for June, 1870*.

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PALFRAT, C. W. *Anderson's Memorial Address at Antietam National Cemetery*, May 30, 1870.

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SUMNER, Hon. CHARLES, U. S. S. *Navy Register of the U. S. for 1870*. *Official Army Register for 1870*. *Butler's Speech in U. S. H. R. June 3, 1870, on "Internal Tax."* *Commerce and Navigation, 1868-'69*, 2 vols. 8vo. *Finance Report, 1869*, 1 vol. 8vo. *Report on Retrenchment, 1870*, 1 vol. 8vo. *Report on Heavy Ordnance, 1869*, 1 vol. 8vo. *U. S. Geological Survey of Colorado and New Mexico, 1869*, 1 vol. 8vo. *Sumner's Speech in U. S. S. June 10, 1870, on "Abolition of Franking."* *Paris Expedition. Report on Weights, Measures and Coins, 1867*. *Scott's Speech in U. S. S. June 22, 23, 1870, on "Income Tax."* *Monthly Report of Agriculture for May and June, 1870*. *Congressional Directory, 2d Session 41st Congress of U. S. A.*

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PUBLISHERS. American Journal of Science. American Literary Gazette. American Naturalist. Book Buyer. Christian World. Cosmos. Eclectic. Essex Banner. Gardner's Monthly. Gloucester Telegraph. Haverhill Gazette. Historical Magazine. Journal de Conchyliologie. Lawrence American. L' Investigateur. Lippincott's Monthly Bulletin. Land and Water. Little Giant. Lynn Reporter. Medical and Surgical Reporter. Nation. Nature. Pavillion. Peabody Press. Semi-Monthly Visitor. Sotheran's Catalogue. The Toecin.

SMITHSONIAN INSTITUTION. Smithsonian Contributions to Knowledge, Vol. xvi, 1 vol. 4to, Washington, 1870. Smithsonian Miscellaneous Collections, Vols. viii, ix, 2 vols. 8vo, Washington, 1869.

VEREIN ZUR BEFÖRDERUNG DES GARTENBAUES. Wochenschrift des Vereins zur Beförderung des Gartenbaues in den Königl. Preuss. Staaten für Gärtnerei und Pflanzenkunde, 1869, 52 Nos., 4to pamph.

VEREIN FÜR ERDKUNDE UND VERWANDTE WISSENSCHAFT. Notizblatt des Vereins für Erdkunde und verwandte Wissenschaften zu Darmstadt und des mittelrheinischen geologischen Vereins 8vo, pamph., 1869.

The Superintendent of the Museum reported the following additions to the Museums of the Institute and Peabody Academy of Science.

CLEVELAND H. R. Skin of a Toucan, Skulls of Cavea Capybara and Alligators. Portions of Lower Jaw of Mastodon. Seeds, Nuts, etc. From the vicinity of Honda, on the Magdalena Rivers, U. S. A.

COLCORD, MRS. H. M., of Peabody. Insects, Galls, etc., from Peabody.

HARRINGTON, C., of Salem. Collection of Nests of Native Birds.

HOLMES, A., of San Francisco, Cal. Bark, Cones, and Seeds of Sequoia gigantea. Lichens growing on dead wood, and the Nest of Tarantula (Mygale) from California.

JOHNSON, W. C., of Newburyport. White-tailed Remora (Echineis albicauda) taken at Newburyport.

LEBARON, J. F. Several specimens of Plants from Florida.

MUDGE, S. A. Fossil Shells.

NEWCOMB, R. L. A mounted specimen of Larus Smithsonianus from vicinity Salem.

OSGOOD, J. B. F. Specimen of *Sarcodes sanguinea* (Snow Plant) from Lake Tahoe, 6,024 feet above sea-level.

PETERSON, G. W. Young of *Limulus polyphemus* from Salem.

SMITHSONIAN INSTITUTION. Collections of Birds' Eggs from various localities, principally Arctic.

VALENTINE, Miss MARGARET P. Several pieces of Roman Pavement from Bransby, England.

WALKER, SAMUEL L. Specimen of *Rhombus maculatus* from Salem Harbor.

WATERS, W. C., of Boston. Kangaroo from Australia.

The President opened the meeting with a few general remarks upon the history of the place, mentioning that Swampscott in 1852 had a separate organization, having been previously a part of Lynn. The Indian name was *Wannasquomskut*, signifying at the cliff or rock summit, and hence modified into Swampscott. He then invited Rev. James T. Hewes to preside over the discussions of the afternoon—a vote having first been passed, that when this meeting adjourned it adjourn to 4 o'clock to-morrow (Thursday) afternoon, in the rooms at Salem.

Rev. Mr. HEWES was brief in his preliminary remarks, saying that he came here "to learn how to see," and giving utterance, among other things, to the truthful idea that it is not necessary to go away from home to get recreation, instruction, or pleasure.

Mr. F. W. PUTNAM was requested to report on several fishes which had been placed on the table. These he stated were specimens of the Rock Cod and of the Pollock. He said that it was like "bringing coals to Newcastle" to come to Swampscott and talk about Codfish, but still there might be some points in the structure of the fishes now before him that might prove interesting to the meeting, and he would therefore call attention to them. He then gave a general account of the structure of the family of fishes of which the Cod and Pollock were members, stating how it differed from the families of which the Salmon, and Sea Perch, or "Connors," were representatives. In this connection he called attention to the structure and position of the fins in the several orders of fishes, and their value as characters in distinguishing the orders and families. He also spoke of the peculiar modification of the fins of fishes, some serving as aids to the movements of the body in swimming. Some fishes swim entirely by their dorsal fins, others by the pectorals, while in still others the pectorals and ventrals were so modified as to be organs of locomotion through the air or on land. He then called attention to the peculiar structure of the ventral, by which means a sucking disk or cup was formed, giving the fish the power of attaching itself with great strength to rocks or other materials; and to the peculiar structure of the dorsal fin of the Remora, or Shark sucker, which fin was so modified as to form a sucking disk on top of the head, enabling the fish to make itself fast by

the top of its head to the under side of sharks, or other large fishes, or to the bottoms of vessels, etc.

He would take this occasion to record the addition of two species of fishes to the fauna of Essex County waters. One of these was a Remora, having the peculiar structure of the head just alluded to. This species now added to the list of county fishes was the White-tailed Remora, the *Echeneis albicauda* of Mitchell. The specimen was taken at the mouth of the Merrimack River last month, and presented to the Peabody Academy by W. C. Johnson, Esq., of Newburyport. The other addition to the county fishes was that of two specimens of the Spotted Plaice, *Pleuronectes maculatus* of Mitchell, as given in Storer's last report, p. 204. This fish is very common at Cape Cod and the south, but the two specimens presented to the Academy by Mr. Samuel L. Walker of Salem, were the first that had been recorded as taken inside the bay, and having been caught in Salem harbor they form an interesting addition to the county fauna.

Mr. Putnam also stated that a gentleman present had placed a bottle on the table containing the Saw flies developed from the Current worm, of which so much was said at the last meeting. These Saw flies had gone through their transformations in the bottle in nine days. There was no earth in the bottle and it was an interesting fact to know that they could transform without it.

Prof. E. S. MORSE described some of the more common forms of animal life as we find them in our rambles along the shore, showing the distinctive features of the different species of mollusks, with great clearness. A bottle of marine worms was exhibited and described in this connection, showing the wonderful order and system which characterizes even these lower animals, and also that common animal the barnacle, which was formerly included among the mollusca before their organization was fully understood, and is now placed among the articulates.

Mr. HYATT made some remarks upon the generally accepted views of the upheaval and subsidence of continents, and mentioned that he lately found a raised beach on Marblehead Neck, some eight or ten feet above the present limit of high tide. This was a smooth water worn porphyry cliff. The extreme friability of this porphyry, and its rapid disintegration, as well as the form of the neighboring cliffs, show that the elevation must have been comparatively recent. The speaker then suggested that Dr. Winslow, who was present, should explain his views with regard to the subsidence of continents, which although very different from those commonly received, had been matured after many years of travel and study, and would undoubtedly be interesting to the Institute.

Dr. C. F. WINSLOW, of Boston responded to the call of the chair

upon a topic by which the attention of the Institute was called by Mr. Hyatt. This was upon the dynamics of geology, a subject to which Dr. Winslow, in the course of his extensive travels, had given special attention. The Dr. stated that his views of the causes of the general geographical features of the globe, as they at present existed, differed from the common theories of geology. He was compelled by his observations to believe in sudden *subsidences* of vast continental areas rather than in the *slow upheavals* of hills, mountain chains and continents. His attention was specially called to this subject when visiting the island of St. Paul's, in the Indian ocean. This is an island many hundred feet high, constituting an extinct crater, one side of which has sunk lower than the general subsidence of the land, leaving a channel of seventy feet wide, through which the sea flows with a depth of nine feet. The depth of water in the crater is two hundred feet, and is the same depth outside the bar, and for several miles on the south eastern side of the island. The ocean also presented a discolored appearance for one or two days sail to the south east, indicative of soundings with no very great length of line. That a great continent once occupied the Indian Ocean is the inference. Continuous observation of the various coasts of continents and great islands, and the various aspects of declivities and dislocated strata in high mountainous regions, as of the Atlas, Sierra Nevada, Andes, and Alps, and appearances even among some of the South Sea Islands, had slowly but strongly convinced him that the present theory ought to be carefully examined by geologists, with a view to its correction. He had presented two memoirs on this subject to the Boston Society of Natural History, in years past; and has subsequently found his observations and opinions sustained by those of DeLuc, a Swiss naturalist, whose observations upon the appearances of the Jura, led him (about the middle of the last century) to declare that these mountains resulted from subsidences rather than from upheavals.

This question of subsidence, however, led to other geological considerations of a very important character. It involved the necessity of vast caverns between the crust and molten nucleus of the planet, into which the crust, from cycle to cycle, has been rent or plunged. He had shown these to exist, as might be seen by his memoirs, under the northern part of the South American continent, under the Gulf of Mexico and Central America, into which all that area of the planet might at any moment fall, and the oceans be changed. The planet, when life first appeared, must have been five hundred miles larger in all its diameters. This view would comport well with the knowledge recently attained, relative to the consideration of physical force. It would also extend this knowledge in cosmical directions.

[To be concluded.]